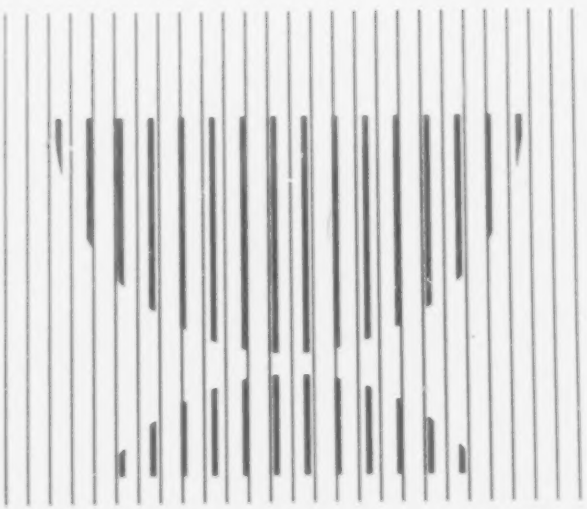
CBO STAFF MEMORANDUM

PROJECTED IMPACT OF INCREASED INSURANCE PREMIUMS ON THE BANKING INDUSTRY AND THE BANK INSURANCE FUND

MAY 1991



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This memorandum was prepared by Tom Lutton under the supervision of Elliot Schwartz. Phil Bartholomew, Michael Crider, Bob Hartman, Kim Kowalewski, and Bob Sunshine contributed substantially to this memorandum. This analysis was conducted at the request of the Committee on Banking, Housing, and Urban Affairs of the United States Senate. It examines the effects of increased premiums on the banking industry and the Bank Insurance Fund (BIF). In accordance with the Congressional Budget Office's mandate to provide objective and impartial analysis, the memorandum contains no recommendations.

NOTE: All years are fiscal years, unless otherwise stated.

SUMMARY

Increases in bank insurance premiums may be used to recapitalize the Bank Insurance Fund (BIF), but not without causing additional bank failures and increases in gross losses to the fund in the near term. This analysis illustrates the potential effects of various premium increases on the banking industry and the balance of the BIF for fiscal years 1991 through 1996. Fund balances are compared with a fiscal 1996 standard based on 1.25 percent of insured deposits as mandated by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA).

The principal finding of these simulations is that it is likely to take a substantial increase in the premiums above the current 19.5 cent premium to recapitalize the BIF to the FIRREA standard by fiscal year 1996. To reach that target the premium required would have to approach 46 cents per $100 of insured deposits, under the Congressional Budget Office's (CBO's) baseline assumptions.

INTRODUCTION

The BIF may become illiquid before 1991 has ended. Almost 600 banks have failed in the last three years and over 1,000 banks in the last decade. As banks fail, the Federal Deposit Insurance Corporation (FDIC) draws down the BIF balance to cover costs of resolution. BIF outlays have exceeded income for the last three years, and the last decade of bank closures has taken its toll on the fund. Current and announced premiums appear inadequate to recapitalize the fund.

This memorandum provides simulations that illustrate how increases in premiums may affect the banking industry as a whole and the balance of the BIF over fiscal years 1991 through 1996. As part of this analysis, CBO estimates premiums required to recapitalize the fund at 1.25 percent of insured deposits by 1996. The simulations take into consideration the weakened state of the industry and the current recession. The memorandum examines the effects of increased premiums on bank failures, gross losses to the fund, and the fund balance.

Some initial caveats are in order. While the simulations made in this report include estimates of effects of the current recession and secular trends in the banking industry, the depth and duration of the current downturn remain uncertain. Moreover, the effect of increased premiums depends critically on the ability of banks to pass the cost through to their customers and on the extent to which the rate of growth of deposits is affected by premium increases. Because past history offers little guidance on how to estimate these behavioral responses, somewhat arbitrary assumptions must be made about them.

PREMIUM INCREASES AND BANK FAILURES

Recapitalizing the BIF is not simply a matter of raising BIF premiums because higher premiums may increase the number of bank failures and associated resolution costs payable by BIF.

As premiums increase, banks will initially attempt to increase interest rates charged to borrowers or decrease interest rates paid to domestic depositors in order to shift the burden of the increased premiums to bank customers. To the extent that banks can sustain these actions, stockholders would be spared the burden of increases in the costs of financial intermediation resulting from the premium increases. Neither profits nor equity would decline. Conversely, the less able banks are to shift this burden, or the more sensitive bank customers are to such a tactic, the more bank profits, dividends, and equity would decline. In this case, stockholders would be forced to accept more of the burden.

As profits, dividends, and equity decline, marginal banks become more likely to fail. Failures, in turn, require additional expenditures for the BIF. Consequently, the effectiveness of raising insurance premiums to recapitalize the fund critically depends upon the ability of banks to transfer the increased costs to customers. If banks cannot do so, increased premiums will elicit more bank failures in an already weakened industry. At very low rates of passthrough, increased revenues may be more than offset by increased losses to the fund, if premiums are increased beyond a certain level.

Despite the importance of the passthrough issue, there is little agreement among banking experts on an appropriate way to characterize actual bank behavior (see Box).

CBO BASELINE

CBO's baseline projection shows the BIF accrual balance by the end of fiscal year 1996 to be $9 billion, based on 751 bank failures with problem assets of $282 billion. Based on an assumed premium structure that raises the premium fee gradually to 30 cents by fiscal year 1993, the BIF would be $21 billion short of the mandated insurance fund balance set by FIRREA of 1.25 percent of insured deposits. A premium as high as 46 cents would have to be charged beginning in July 1991 and continuing over the 1991-1996 period to hit this standard. Furthermore, premiums at this level would not provide enough cash to cover BIF's needs during the period; the baseline assumes that BIF borrows and repays $11 billion from the Federal Financing Bank over the 1991-1996 period.

The projected losses to the BIF are attributable to future bank failures. The baseline uses estimates of the probabilities of failure obtained by a type of actuarial analysis. The relative frequencies of recent bank failures provide estimates of the

BOX 1

HOW BANKS REACT TO HIGHER PREMIUMS: THE PASSTHROUGH ASSUMPTION

A helpful way to understand the importance of the passthrough assumption is to view the problem from three courses of action that a bank may take in response to an increase in assessments. Banks earn profits from offering financial services--both lending and deposit services. Their net income is determined from the difference between the interest rate they charge borrowers and what they pay depositors--the interest rate spread--plus the fees charged for servicing customer accounts, minus administrative expenses.

A profitable bank could use its current income to meet a premium assessment increase. Such a course of action, however, may decrease dividends or retained earnings, raise its cost of funds, and increase its probability of failure. Over 1,450 banks (out of a total of over 12,000 banks) could not have pursued such a strategy during 1990 because they reported net income losses.

Another course of action is to pursue a strategy of passing the premium through to bank customers by increasing the cost of financial services. This may be accomplished on the asset side of the bank's balance sheet through raising interest rates to borrowers or increasing noninterest fees. The success of this strategy depends, in part, on the sensitivity of the demand for bank services and the supply of alternative sources of credit. The more sensitive both the demand for borrowing and the supply of nonbank credit is to interest rates, the smaller the potential for a bank to pass through premium costs by raising interest rates to borrowers.

Banks may pursue adjustments on the liability side of their balance sheet. They may lower the interest paid on deposits and increase the fees for deposit services. Lower interest rates on deposits may encourage depositors

to shift to other banks or to nonbank alternatives, such as money market mutual funds, that are not subject to deposit insurance premiums. Moreover, banks may encourage depositors to switch to accounts that are not currently part of the deposit insurance assessment base. For example, bigger banks could switch customers' domestic deposits to accounts with the banks' foreign subsidiaries. Foreign deposits are not part of the base on which premiums are levied. Banks might also offer current depositors the service of purchasing Treasury securities for them. Premium liabilities would decline as banks lose deposits, and they would earn fees for the service. If these strategies were adopted, increasing the insurance premium could result in a lower base of deposits and reduced income to the insurance fund.

The optimal strategy for a bank is likely to depend on its financial condition, projected net income streams, and competition. Some banks might accept net income and dividend reduction strategies; others will be forced to pursue alternative asset and liability adjustment strategies. Bank expenses may also be cut. Most of the strategies, however, lead to a common result: the net-worth or equity of the institution is likely to be lower than it would have been without the increased assessments.

The economic literature has little to say about what strategy banks are likely to employ. There is little research concerning how much and which groups will bear the burden of the premium increases. Consequently, CBO ran simulations that provide a range of possible effects from raising the BIF premiums. First, two extreme assumptions concerning passthrough--the 0 percent passthrough assumption (stockholders bear the full burden of the premium increases), and the 100 percent passthrough assumption (bank customers bear the full burden)--are illustrated. A more reasonable assumption is a 50 percent passthrough, which CBO uses in its baseline: half the burden is born by bank customers and half by stockholders. It is important to note, however, that the CBO baseline assumes that deposit and loan activity will continue to grow at about historical rates regardless of the premium increases.

probabilities of failure for currently operating institutions based on the size and equity/asset ratio of the institutions. CBO combines historical loss rates per dollar of assets, the probability of failure estimates, and the volume of assets in 1990 to produce estimates of gross BIF losses. These expected losses are allocated over the forecast period and combined with additional budget information on cash flows and other aspects of BIF operations to produce estimates of the fund balance.

The CBO baseline makes three additional assumptions. First, a moderate recession that reduces banks' equity/asset ratios is assumed. The severity of the recession is the same as that of the January 1991 CBO baseline.

Second, the historic loss rate on assets of failed banks is assumed to apply to future bank failures. This rate is sensitive to a number of factors, including the speed with which bank regulators close failed institutions, and the value of bank franchises. The rate of loss could go down, for example, if bank regulators close institutions more quickly. Or it could go up, for example, if higher premiums increase bank costs and reduce potential buyers' willingness to bid on failed banks. CBO baseline projections do not adjust loss rates up or down from their historical levels.

Third, the baseline assumes the assessable base of domestic deposits grows at a constant rate of 4.5 percent per year. Growth in the assessable base is a key assumption because the principal revenue to the BIF is premium income, estimated simply by multiplying the premium rate by the assessable base. If the annual growth rate in deposits were increased or decreased by only 1 percentage point, potential revenues would be increased or decreased by about 3 percent over the 1991-1996 period. This would raise or lower the BIF accrued fund balance in 1996 by $1 billion. The baseline holds the growth in assessable deposits constant, regardless of any changes in the premium. For small changes in the premium, as assumed in the baseline, this is probably a reasonable assumption. For large premium increases, however, such as many of those being simulated, this assumption may very well overestimate BIF income and understate the extent of the recapitalization problem.

SIMULATION RESULTS

The simulations show the effects of seven different premium schedules and three passthrough assumptions. Calculations are shown for fixed premium rates of 23, 30, 40, and 50 cents per $100 of domestic deposits beginning July 1, 1991 and extending through 1996. Variable premium rate calculations are shown for CBO baseline rates, which gradually escalate from 23 cents to 30 cents per $100, and two one-year premium increases to 100 cents and 150 cents for the period from July 1, 1991 to June 30, 1992, followed by 23 cent premiums for the remainder of the forecast period. Under constant premiums, the BIF balance rises with higher premiums, given the assumption that deposit growth remains unchanged.

As shown in the accompanying table, if banks were able to pass through 100 percent of the premium change to their customers, then there would be no change

in the banks' earnings or equity and hence no change in CBO's estimate of bank failures. Conversely, if banks cannot pass through any of the premium increases (the 0 percent passthrough case), bank failures and BIF losses may be quite large. These results are specifically discussed below.

50 Percent Passthrough. This case reveals that even with gradual increases in premiums to 30 cents by 1993 and continuing 30 cent annual premiums thereafter, complete recapitalization of the BIF to the FIRREA mandated level will not occur by 1996. Reaching the BIF target of 1.25 percent of insured deposits would require fixed premiums of about 46 cents per $100 of insured deposits in each year, beginning July 1, 1991. Even higher premiums would create a balance in excess of the FIRREA target, although at radically higher premiums more bank failures and higher gross BIF losses would eventually result. One-year premium increases of 100 cents or 150 cents could be used to recapitalize the fund, but not without some additional bank failures. After these one-year increases, premiums would have to be set at 37 cents or 29 cents respectively to hit the 1.25 percent FIRREA requirement.

0 Percent Passthrough. From the perspective of recapitalizing the fund and avoiding bank failures, the 0 percent passthrough case is the most pessimistic. It is quite likely, however, that this case overstates both the losses to the fund and the number of failures for an industry that recorded $14 billion in net income and $12 billion in dividend payments during calendar year 1990. Under 0 percent passthrough assumptions, banks have no market power and must absorb the entire increase in assessments. Simulations suggest that the number of bank failures would increase from 761 under CBO's baseline premium to 802 at a 50 cent premium rate. Approximately 822 banks are projected to fail under the one-time 150 cent premium case. As a result, premium increases with a 0 percent passthrough assumption produce very small improvements in the fund's condition. For example, a 50 cent premium would add only $6 billion to the accrued fund balance by 1996, compared with baseline premium assumptions. Assuming 0 percent passthrough, there is no way to hit the FIRREA mandated fund balance by 1996 with premium increases. Even at a 50 cent per $100 premium, the BIF balance would fall far short of the desired level. Premiums much above 50 cents are counterproductive because they produce greater gross losses than premium income.

100 Percent Passthrough. If banks can pass through all of the increase in premiums, these increases do not affect bank failures or gross losses to the fund. The 100 percent passthrough assumptions are, of course, the most optimistic from the perspective of fund recapitalization. A constant premium of 36 cents per $100 would completely recapitalize the fund by 1996. One-time increases in premiums to 100 cents or 150 cents could balance the fund with follow-on premiums of only 21 cents or 9 cents, respectively.

A 100 percent passthrough is probably an extreme assumption, however, as is the 0 percent passthrough assumption. Competitive markets for bank services would seem to preclude a full 100 percent passthrough.

TABLE I. SIMULATED IMPACTS OF ALTERNATIVE PREMIUMS ON THE BANKING INDUSTRY, 1991 THROUGH 1996

	Constant Premium				Variable Premiums		
					CBO Baseline Premiums	One-Year Premium Followed by Constant Premium [a]	
	23 Cents	30 Cents	40 Cents	50 Cents	23 Cents to 30 Cents	100 Cents	150 Cents
0 Percent Passthrough							
Problem Assets ($ bil.)	299	336	398	472	326	427	540
Bank Failures	755	764	781	802	761	789	822
Gross BIF Losses ($ bil.)	45	50	60	72	49	65	84
BIF Balance FY96 ($ bil.)	−4	0	4	6	0	−6	−15
Shortfall (−) from FIRREA Standard ($ bil.)	−34	−30	−26	−24	−30	−36	−45
FIRREA Standard Premium (cents)	NA	NA	NA	NA	NA	NA	NA
50 Percent Passthrough							
Problem Assets ($ bil.)	271	287	311	339	282 [b]	322	362
Bank Failures	748	752	758	765	751 [b]	760	771
Gross BIF Losses ($ bil.)	36	43	47	51	42 [b]	48	55
BIF Balance FY96 ($ bil.)	2	11	23	35	9 [b]	17	25
Shortfall (−) from FIRREA Standard ($ bil.)	−28	−19	−7	5	−21 [b]	−13	−5
FIRREA Standard Premium (cents)	46	46	46	46	46	37	29
100 Percent Passthrough							
Problem Assets ($ bil.)	245	245	245	245	245	245	245
Bank Failures	743	743	743	743	743	743	743
Gross BIF Losses ($ bil.)	36	36	36	36	36	36	36
BIF Balance FY96 ($ bil.)	7	19	37	55	17	33	50
Shortfall (−) from FIRREA Standard ($ bil.)	−23	−11	7	25	−13	3	20
FIRREA Standard Premium (cents)	36	36	36	36	36	21	9

SOURCE: Congressional Budget Office.

NOTES: All premiums are assumed to be imposed on July 1, 1991.
BIF is the Federal Deposit Insurance Corporation's Bank Insurance Fund.
FIRREA is the Financial Institutions Reform, Recovery, and Enforcement Act of 1989.
Annual growth in assessable base is 4.5 percent, and is assumed to be unaffected by premium increases.
Problem Assets are 1990 assets held by banks projected to fail by 1996.
Gross BIF Losses are losses to the BIF associated with bank failures from 1991 through 1996.
BIF Balance FY96 is the end of year accrual balance of the fund for fiscal year 1996, assuming surpluses are not rebated.
FIRREA Standard Premium is the premium necessary to achieve by 1996 the mandated level of 1.25 percent of deposits, assuming it is imposed July 1, 1991.
NA means the standard cannot be met.

a. Except for the FIRREA standard premium, the constant premium equals 23 cents from July 1992 through 1996.
b. CBO baseline.